Message

From: Robinson, Valois [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=A4217A71307D4429B7BDC7C80EB40C7D-SHEA, VALOIS]
Sent: 7/28/2020 5:41:20 PM
To: MaryEllen.Tuccillo@cadmusgroup.com
Subject: Groundwater flow rates in Inyan Kara - Email 1
Attachments: Rahn_InyanKaraPermeability_ML15182A141.pdf; AppendixJ_PowertechPumpingTests_comp.pdf

Comment"

Documents prepared by Petrotek for Powertech/Azarga set subsurface water movement rates at 6 to 7 feet per year (without offering peer-reviewed sources). NRC documents set the transmissivity rate in the Fall River formation at 255 $ft.^2$ per day and in the Lakota formation at 150 $ft.^2$ per day. Dr. Perry Rahn's 2014 article, mentioned above, concluded that the average ground water velocity for the Lakota and Fall River formations in the Dewey-Burdock area was 66.1 ft./year. But, he said, groundwater velocity in the Inyan Kara Aquifers at the Dewey-Burdock site might be as much as 5,480 feet per year - over a mile -- which "might indicate fast groundwater movement through very permeable units or through fractures," although he considered this number "very high." The draft permits omit this critical information that could have very real impacts on wells that are downgradient of the proposed mine site. This issue is critically important, and further independent studies should be done before any permit is issued.

I will send the Petrotek report in an separate email because it is large.

Valois

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